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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/997,132	11/29/2001	Naoto Ohashi	SHC0159	5337
7590 09/28/2004			EXAMINER	
Micheal S. Gzybowski Butzel Long 350 Main Street Ste 300 Ann Arbor, MI 48104			REICHL, KARIN M	
			ART UNIT	PAPER NUMBER
			3761	
DATE MAILED: 09/28/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/997,132

Applicant(s)

OHASHI ET AL.

Examiner

Karin M. Reichle

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2004.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 7/6/04 & 11/19/01 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
 - 2) ☐ Certified copies of the priority documents have been received in Application No. _____.
 - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Specification

Drawings

1. The drawings were received on 7-6-04(Figure 1). These drawings are approved. Figures 2-4 filed 11-29-01 were also approved by the Draftsman.

Claim Objections

2. Claim 4 is objected to because of the following informalities: on line 2, “fiber” should be --fibers--. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claim 4 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear whether the water absorbent fibers around the depth of the core and those on line 9 of claim 1 are one and the same, i.e. if so on line 1, before “said”, --some-
- should be inserted, on line 2, after “of”, --the-- should be inserted and on line 3, before
“water”, --at least some of the remaining-- could be inserted.

Claim Language Interpretation

4. With respect to the last two subsections of claim 1, the claim terminology “at a lower portion of the ... core” does not require the zone be at or form the lowest or lowermost portion of the core nor be at or form the lowest half of the core nor that the zone only be at or form a lower portion. As claimed, at least a portion of the zone just has to be at a portion of the core which portion is lower than another portion of the core. The claim terminology “a higher concentration ... groove” does not require the concentration of the particles of the zone be highest in the vicinity of the at least one groove just higher in the vicinity than in at least some other portion of the zone. Therefore the last two subsections of claim 1 will be interpreted as requiring a core containing fibers and particles with particles being disposed in a single zone within the core which is coextensive with the width of the core and extends along the bottom of the at least one groove, at least a portion of the zone being at a portion of the core which portion is at least lower than another portion of the core and wherein the particles in such zone are disposed so as to have a higher concentration within a vicinity of the at least one groove than in at least some other portion of the zone. It is further noted that the zone is not required to be a planar zone, i.e. can be curved, nor have the superabsorbent uniformly distributed throughout. Claim 4 is interpreted as requiring some of the water absorbing fibers forming the core form a layer therein which layer is in close contact with the topsheet and has a higher density than at least some other of the water absorbent fibers which do not form such layer. Claim 6 is interpreted as requiring a particle distribution gradient in the thickness direction of at least a portion of the zone/core, i.e. it is not required that the density only increases. Claim 9 is interpreted as requiring a

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particle distribution density between the grooves higher than a density of at least a portion outside the grooves but not necessarily the highest density of the zone/core.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenfeld et al '016 in view of Pieniak et al. '442.

Claims 1-9: See Claim Interpretation Section supra and Response to Argument section infra.

In regard to claims 1-3, 5, and 7-8: see Figures, especially 1, 2, 4-5 and 7-8, col. 1, lines 19-21 and 26-29, col. 2, lines 6-24, col. 2, line 57- col. 3, line 47, col. 5, lines 22-29 and 35-57, col. 6, lines 31-39, col. 6, line 58-col. 7, line 17, col. 7, line 55-col. 8, line 3, col. 8, lines 13-19 and 40-42, col. 9, lines 16-32, and 40-63, col. 10, lines 10-13 and 33-50 and col. 11, lines 49-53, e.g. in Figure 7, the topsheet is 72, the backsheet is 74, the core is 1, the groove is 50, the groove bottom is 56, the groove walls are 54, the fibers are 14, and the particles are 16. Claim 1 now requires substantially all of said superabsorbent particles contained within the core be localized in a single "zone" at a lower portion of the core. Note again the Claim Language Interpretation section supra. Turning to Rosenfeld '016, such "zone" is considered the two adjacent superabsorbent concentrations, e.g. 8 and 10 as seen in Figure 1 or similar to only 10 and 64 in Figures 4 and 5, which have had grooves 50 compressed thereinto, e.g. as seen in Figures 2 and 4-5, which concentrations can be adjacently located at any number of "lower" portions of

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the core, e.g. in the locations of 8 and 10 in Figure 1 or in the locations of 10 and 64 in Figures 4 and 5. (It is noted that while the '016 reference calls the two adjacent superabsorbent containing portions first and second "zones", those portions are compressed to form the grooves 50 therein joining the superabsorbent containing portions together, see, e.g., layers 10 and 64 in Figures 4 and 5 adjacent the grooves 50, to form two nonmutually exclusive superabsorbent containing portions with a superabsorbentless portion therein. It is further noted however the Applicant's invention also includes superabsorbent containing portions and portions which are superabsorbentless therein, i.e. the fibrous portions between the superabsorbent and fiber containing portions. Therefore the structure of Rosenfeld is considered as much a "zone" as claimed as is Applicant's "zone"). Such "zone" of '016 can extend across an entire surface, i.e. length and width, of the core. It is noted that claim 1 requires a higher concentration of particles within a vicinity of the at least one groove. This terminology has not been given a specific definition by Applicant so the usual or dictionary definition applies. See the Claim Language Interpretation section *supra*. Also, the American Heritage Dictionary defines "vicinity" as "The state of being near in space or relationship, proximity." In other words the term is relative. Thus, as, for example, shown in the Figures, a higher concentration of particles is shown around the grooves 50, see Figures cited *supra*. Thus the Rosenfeld et al device is deemed to teach a higher concentration in "a vicinity" of the groove as claimed. It should be noted that since Rosenfeld et al also teaches that the "zone" including the bottom of the groove can be formed with a homogenous mixture of fibers and particles or a gradient, if an area of such "zone" is densified to form the channels 50, the area below such channels will have a higher density or concentration of

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particles and fibers per unit dimension than other of the uncompressed areas of such “zone”. It is also noted with regard to the claims 1-3, that the claims do not require direct joining between the portions of the groove and the diffusive sheet and the diffusive sheet and the topsheet. Applicant did not provide a specific definition of the term “joining” so the usual or dictionary definition applies, i.e. could be direct or indirect attachment. Therefore, the Rosenfeld et al device includes all the claimed structure, as best understood, except for teaching an absorbent and diffusive sheet covering the core and thereby its joining to the polymer particles and topsheet along the grooves although it does teach the core can include a layer of tissue. However, see Pieniak et al, col. 10, lines 34-44, i.e. it is well known to wrap core in tissue to prevent dusting of particles and the tissue can thereby be joined to grooves of core, i.e. particles, and top sheet to enhance fit and aesthetics. To employ the tissue to wrap the core and join it to the grooves of the core as taught by Pieniak et al on the Rosenfeld device would be obvious to one of ordinary skill in the art in view of the recognition that it is well known to wrap the core with tissue to prevent dusting of particles and joining to the grooves of the core and topsheet would enhance the fit and aesthetics and the desire of such features in any absorbent article. It is also noted that such would necessarily improve the integrity of the core and col. 1, lines 19-21 and 26-29 of Rosenfeld. Figure 7 of Rosenfeld also shows a single nonplanar zone of particles coextensive with the width of the core.

Claim 4: see col. 2, lines 57-63, col. 3, lines 32-37 and Figures cited supra. It should be noted that since Rosenfeld et al also teaches that the zone including the bottom of the groove can be formed with a homogenous mixture of fibers and particles or a gradient, if an area of such zone is densified to form the channels 50, the area below such

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channels will have a higher density or concentration of particles and fibers per unit dimension than at least other of the uncompressed areas of such zones, i.e. layer of fibers exists at the bottom of each groove which has a higher density than at least some fibers which do not form each such layer, and will be in close contact with the topsheet.

Claims 6 and 9: See Figures cited supra, Claim Language Interpretation section supra and col. 3, lines 12-30 and col. 7, line 55-col. 8, line 6.

7. Claims 1-8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenfeld '884 in view of Pieniak '442.

Claims 1-8 and 10-11: see Claim Language Interpretation section supra, especially with respect to the definition of "a lower portion of the core" and the response to arguments, infra.

In regard to claims 1-3, 5 and 7-8: see Figures 2 and 4-5, page 1, lines 17-18 and 21-23, page 2, lines 49-51 and paragraphs 12-14, 17, 21, 24-26, 30 and 33, e.g. in Figure 4, the topsheet is 33, the backsheets are 34, the core is 1, the groove is 12, the groove bottom is 14, the groove walls are 13, the fibers are 7, the particles are 8, the single zone is 22 and 6 at a lower portion of the core, i.e. below some other portion of the core, which zone can extend across an entire surface, i.e. length and width, of the core. It is noted that claim 1 requires a higher concentration of particles within "a vicinity" of the at least one groove. This terminology has not been given a specific definition by Applicant so the usual or dictionary definition applies. The American Heritage Dictionary defines "vicinity" as "The state of being near in space or relationship, proximity." In other words the term is relative. Thus, as, for example, shown in the Figures, a higher concentration of particles is shown around the grooves 12, see Figures cited supra. Thus the Rosenfeld

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et al device is deemed to teach a higher concentration in “a vicinity” of the groove as claimed. It should be noted that since Rosenfeld et al also teaches that the zone including the bottom of the groove can be formed with a homogenous mixture of fibers and particles or a gradient, if an area of such zone is densified to form the channels 12, the area below such channels will have a higher density or concentration of particles and fibers per unit dimension than at least some of the uncompressed areas of such zone. Therefore, the Rosenfeld et al device includes all the claimed structure, as best understood, except for teaching an absorbent and diffusive sheet covering the core although it does teach the core can include a layer of nonwoven. However, see Pieniak et al, col. 10, lines 34-44, i.e. it is well known to wrap core in tissue, i.e. a nonwoven, to prevent dusting of particles and tissue can thereby be joined to grooves of core, i.e. particles, and top sheet to enhance fit and aesthetics. To employ the tissue to wrap the core and join it to the grooves of the core as taught by Pieniak et al on the Rosenfeld device would be obvious to one of ordinary skill in the art in view of the recognition that it is well known to wrap the core with tissue to prevent dusting of particles and joining to the grooves of the core and topsheet would enhance the fit and aesthetics and the desire of such features in any absorbent article. It is also noted that such would necessarily improve the integrity of the core and col. 1, lines 19-21 and 26-29 of Rosenfeld. It is noted that Figure 4 of Rosenfeld also shows a single nonplanar zone of particles coextensive with the width of the core.

Claim 4: see paragraphs 13 and 30 and Figures cited supra. It should be noted that since Rosenfeld et al also teaches that the zone including the bottom of the groove can be formed with a homogenous mixture of fibers and particles or a gradient, if an area

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of such zone is densified to form the channels 50, the area below such channels will have a higher density or concentration of particles and fibers per unit dimension than at least some other of the uncompressed areas of such zones, i.e. layer of fibers exists at the bottom of each groove which has a higher density than at least some fibers which do not form each such layer, and will be in close contact with the topsheet.

Claim 6: See Figures cited supra and paragraph 13.

Claims 10-11: see page 5, lines 1-5 of Rosenfeld '884, and thereby Goldman '646 at col. 23, lines 13-18, col. 26, lines 53-62, col. 27, lines 15-30 and 39-41, the paragraph bridging cols. 27-28 and 29-30, col. 29, lines 24-27, claims 28, 32-34 and 42-45.

Response to Arguments

8. Applicant's remarks with regard to the informal matters have been noted but are either deemed moot in that the issue discussed has not been reraised or is deemed not persuasive for the reasons set forth supra. Applicant's remarks with regard to the Rosenfeld '884 reference have been considered but are deemed narrower than the claim language which does not require "a lower portion of the core" to be, e.g., the lower 65% of the core only. Note the cited portions of '884, especially the Figures, which show all the superabsorbent in a nonplanar zone which zone is positioned beneath some other portion of the core at the very least and with respect to the zone at the bottom of the grooves is located at a lowermost portion of the core. Applicant's remarks with respect to Rosenfeld '016 are also narrower than the claim language and the teachings of '016. As already discussed supra, the claims require a single "zone" but do not set forth that each portion of the zone must have a specific density of superabsorbent per unit area

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therein (It is noted that a such a density is not even disclosed). Applicant's zone also includes portions which don't contain superabsorbent, i.e. between portions which contain superabsorbent. Furthermore '016 does not require the superabsorbent containing portions be discrete or mutually exclusive of each other but merely have superabsorbentless portions between at least some of superabsorbent containing portions. Therefore, the structure of the claims does not distinguish over the Rosenfeld structure regardless of whether such structure is called first and second "zones" or a "zone".

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The cited prior art teaches grooves and zones of superabsorbent.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any new grounds of rejection were necessitated by the amendments to the claims.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karin M. Reichle whose telephone number is (703) 308-2617. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Larry Schwartz can be reached on (703) 308-1412. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Karin M. Reichle
Karin M. Reichle
Primary Examiner
Art Unit 3761

KMR
September 21, 2004